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Undergraduate mathematics students' emotional experiences in linear algebra courses.

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Summary: Little is known about students' emotions in the field of Mathematics Education that go beyond students' emotions in problem solving. To start filling this gap this qualitative research has the aim to identify emotional experiences of undergraduate mathematics students in Linear Algebra courses. In order to obtain data, retrospective focus group interviews were carried out with 27 students. Data analysis is based on the theory of cognitive structure of emotions, which specifies eliciting conditions for each emotion and the variables that affect intensity of emotions. Results show that the participants' emotional experiences in Linear Algebra courses are: satisfaction and disappointment emotions, fear emotions, distress emotions and self-reproach emotions. These emotions are triggered by the appraisal of different situations like the difficulty attributed to Linear Algebra courses, solving problems, asking questions in class, going to the blackboard to solve problems and failure in a course. The students' emotional experiences are based on their appraisal of the situations in terms of specific goals and standards. Some implications for future research on affect in Mathematics Education are discussed.

Classification: C25 H65

Keywords: emotions in mathematics education; students' emotions; theory of cognitive structure of emotions; linear algebra

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